WHAT IS CLAIMED IS:

1. A method for manufacturing a vacuum or hermetically packaged micromachined or MEMS device having at least one substantially vertical feedthrough, the method comprising:

providing a micromachined or MEMS device fabricated on a first side of a substrate and located within a vacuum or hermetic cavity;

forming at least one hole completely through the substrate between first and second sides of the substrate after the step of providing; and

forming a path of electrically conductive material connecting the micromachined or MEMS device and the second side of the substrate through the at least one hole to form the at least one substantially vertical feedthrough.

2. The method as claimed in claim 1, wherein the substrate is a glass substrate.

3. The method as claimed in claim 1, wherein vacuum or hermetic cavity is at least partially defined by a capsule connected to the substrate at a bonding area.

4. The method as claimed in claim 1, wherein the micromachined or MEMS device includes at least one microstructure.

5. The method as claimed in claim 4, wherein the at least one microstructure includes a doped-semiconductor or metal microstructure.

6. The method as claimed in claim 1, further comprising forming a plurality of electrical leads on the first side of the substrate in communication with the micromachined or MEMS device.

7. The method as claimed in claim 1, wherein the step of providing may include the step of bonding a capsule to the substrate to form the

vacuum or hermetic cavity and wherein the step of forming may include the step of partially forming the at least one hole from the first side before the step of bonding.

8. The method as claimed in claim 1, wherein the step of forming the at least one hole includes the step of etching the substrate at the second side of the substrate.

9. The method as claimed in claim 3, wherein the step of forming the path includes the step of depositing a layer of electrically conductive material on the second side of the substrate and in the at least one hole.

10. The method as claimed in claim 9, further comprising placing a solder ball or paste in the at least one hole on the layer of electrically conductive material.

11. The method as claimed in claim 9, further comprising bonding a wire to the layer of electrically conductive material.

12. The method as claimed in claim 9, wherein the layer is deposited in the bonding area on the second side and wherein the method further comprises placing a solder ball or paste on the layer of electrically conductive material at the bonding area.

13. The method as claimed in claim 1, further comprising removing material from the second side of the substrate to thin the substrate before the step of forming the at least one hole.

14. The method as claimed in claim 3, wherein the capsule is anodically bonded at the bonding area.

15. The method as claimed in claim 3, wherein the capsule is eutectically or solder bonded at the bonding area.

16. A method for manufacturing a vacuum or hermetically packaged micromachined or MEMS device, the method comprising:

providing a wafer and a substrate having first and second sides;

partially forming at least one hole in the first side of the substrate;

bonding the wafer to the substrate to obtain a device substrate after the step of partially forming;

fabricating a micromachined or MEMS device from the wafer after the step of bonding;

positioning a capsule having a concave surface on the device substrate over the micromachined or MEMS device;

bonding the capsule to the device substrate to form a vacuum or hermetic cavity enclosing the micromachined or MEMS device and to form a bonding area which provides a hermetic seal around the vacuum or hermetic cavity;

thinning the substrate down;

finish forming at least one hole completely through the substrate between the first and second sides after the step of thinning; and

forming a path of electrically conductive material connecting the micromachined or MEMS device and the second side of the substrate through the at least one hole.

17. The method as claimed in claim 16, wherein the substrate is a glass substrate.

18. The method as claimed in claim 16, wherein the capsule is a silicon or glass capsule.

19. The method as claimed in claim 16, wherein the micromachined or MEMS device includes at least one microstructure.

20. The method as claimed in claim 19, wherein the at least one microstructure includes a doped-semiconductor or metal microstructure.

21. The method as claimed in claim 16, further comprising forming a plurality of electrical leads on the first side of the substrate in communication with the micromachined or MEMS device.

22. The method as claimed in claim 16, wherein the step of partially forming the at least one hole includes the step of removing material from the substrate to form at least one recess in the first side of the substrate before the step of bonding the wafer to the substrate.

23. The method as claimed in claim 16, wherein the step of thinning includes the step of etching the substrate at the second side of the substrate after the step of bonding the capsule to the device substrate.

24. The method as claimed in claim 16, wherein the step of forming the path includes the step of depositing a layer of electrically conductive material on the second side of the substrate and in the at least one hole.

25. The method as claimed in claim 24, further comprising placing a solder ball or paste that can be heated to form a solder ball in the at least one hole on the layer of electrically conductive material.

26. The method as claimed in claim 24, further comprising bonding a wire to the layer of electrically conductive material.

27. The method as claimed in claim 24, wherein the layer is deposited at the bonding area on the second side and wherein the method further comprises placing a solder ball or paste on the layer of electrically conductive material at the bonding area.

28. The method as claimed in claim 16, wherein the step of thinning includes the step of removing material from the second side of the substrate to thin the substrate after the step of bonding the capsule to the device substrate and before the step of finish forming.

29. The method as claimed in claim 16, wherein the step of bonding the capsule to the device substrate includes the step of anodically bonding the capsule to the substrate.

30. The method as claimed in claim 16, wherein the step of bonding the capsule to the device substrate includes the step of eutectically or solder bonding the capsule to a peripheral portion of the semiconductor device to minimize outgasing into the vacuum or hermetic cavity.

31. A vacuum or hermetic packaged micromachined or MEMS device manufactured in accordance with the steps of claim 16.

32. The device as claimed in claim 31, wherein the substrate is a glass substrate.

33. The device as claimed in claim 31, wherein the capsule is a silicon or glass capsule.

34. The device as claimed in claim 31, wherein the micromachined or MEMS device includes at least one microstructure.

35. The device as claimed in claim 34, wherein the at least one microstructure includes a doped-semiconductor or metal microstructure.

36. The device as claimed in claim 31, further comprising a plurality of electrical leads on the first side of the substrate in communication with the micromachined or MEMS device.

37. The device as claimed in claim 31, wherein the path includes a layer of electrically conductive material in the second side of the device substrate and in the at least one hole.

38. The device as claimed in claim 37, further comprising a solder ball positioned in the at least one hole on the layer.

39. The device as claimed in claim 37, wherein the layer is deposited in the bonding area on the second side and wherein the device further comprises a solder ball positioned on the layer in the bonding area.

40. The device as claimed in claim 31 wherein the micromachined or MEMS device includes at least one MEMS device.